

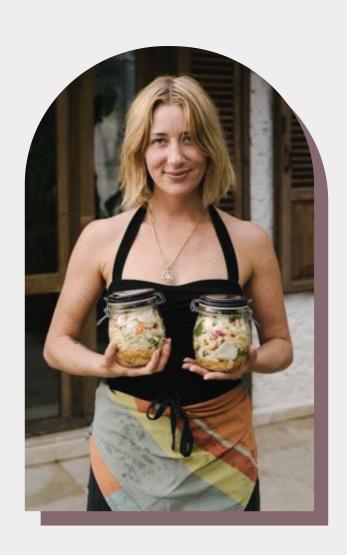
From our founder

GG

Your body's main function is to survive and because of this, we are all complex healing machines. No matter our age, our body never forgets how to heal. If we set up the optimal environment for our cells to regenerate, the body will do the rest.

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- Miriam Thom

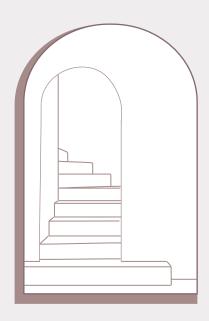


Gut Basics

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Restore

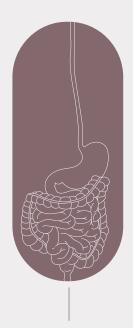
One of most integral organ systems, the gut is made up of the esophagus, stomach and both the small and large intestines — the racetrack for all things we consume.

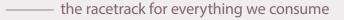
In the larger digestive system, it's the gut barrier that controls the absorption of nutrients and acts as the first defense for the immune system against bacteria, pathogens and other toxins. Meanwhile, as a nerve hub, it's intricately linked to the mind, stress and emotions.

This pillar is about understanding the relationship between your gut and your skin condition, gauging the possible problems you may be experiencing in your gastrointestinal health, and beginning the process of restoring the gut to a stronger version of itself. Replenishing the gut for growth is a process that takes commitment and consistency — and often a lot of changes to what and how you're eating. Don't worry, we're here for you!

We recommed pairing this pillar with Restore Protocol. It's a great time to dive deeper into the purposes of this eating guide for the next month and beyond. We've packed this module with tons of gastro background and helpful tips. Don't worry if you can't soak everything in — it takes time! You'll have plenty of opportunities to return to the material, reacquaint yourself with the major principles and renew your commitment to eating well and keeping your gut microbiome replenished.

On that note, what's your gut-related focus for the month? Perhaps you're still moving through reintroduction, or working on healthy elimination. What about the food you're buying? Maybe this month is about finding a great spot for local and organic produce, checking out a CSA, or focusing on super-charged recipes (e.g. whole grains instead of simple carbohydrates). Maybe it's finding a butcher or fish market who can tell you how and where your meat or fish was sustainably sourced. Maybe you've identified a sensitivity or intolerance and the next few weeks are about taking further steps to adapt your diet. Whatever it is, share your goals in the Connect forum and let us cheer you on!





— filled with nerve endings connected directly to the brain

——— responds to emotions, trauma and external data from the outside world

— its own organ system composed of the esophagus, stomach and small and large intestines

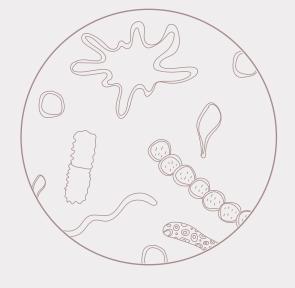
a prominent part of the digestive system (alongside the liver, pancreas, gallbladder, tongue and salivary glands). This system is responsible for digesting the foods we eat, absorbing nutrients and expelling waste, making up a good portion of our vital human functions outside the brain and beating heart

— made of a semi-permeable barrier that absorbs nutrients into the body while keeping toxins out



The gut is the colloquial term for the gastrointestinal tract. If you were to unravel it, it would trace a tennis court.

Integrative medicine calls it the second brain; Traditional Chinese Medicine calls it the first.



The Gut Microbiome

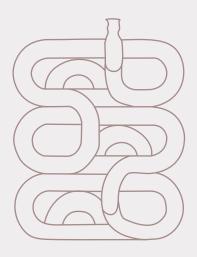
Our bodies depend on trillions of microbes (bacteria and other microscopic organisms) for things like digestion and infection control. The microbiome in our guts — also known as gut flora or microbiota — is similar to how a coral reef depends on algae, fish and other species to thrive. When one key species is absent, the whole reef is affected.

Similarly, when the gut is depleted of its healthy microbes ("good" bacteria), it has a harder time protecting us from pathogenic microbes ("bad" bacteria) and can affect the way the immune system works. In fact, some studies say that our "good" bacteria actually regulate immune responses to pathogens. In turn, pathogenic or opportunistic microbes can cause abnormal immune system responses. For this reason, the gut microbiome plays an important role in autoimmune disorders and many other conditions, especially those related to inflammation.

The Gut Barrier

In easy terms, the gut barrier is the lining of the gastrointestinal tract. It's a membrane that (ideally) absorbs nutrients and rejects harmful bacteria and other toxins. The immune system works at the gut barrier level to differentiate and respond to helpful and harmful substances that enter your digestive tract.

Recall from The Source: Let's say someone is hypersensitive to gluten but they keep eating bread anyway (because bread is delicious! We get it). When the bread gets to their gut, the immune system recognizes it as a harmful substance and will release a certain set of signals that start an inflammatory response. Let's say that they eat bread day after day. The immune system will produce constant proinflammatory signals causing chronic and systemic inflammation. Several of these signals (namely cytokines) are associated with psoriasis and eczema.



The Major Players (continued)



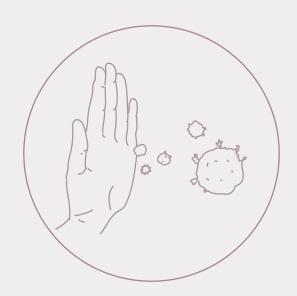
The Liver

Our livers do some of the most important work in the body. An elimination organ, one of its main functions is to filter blood. The liver also produces the bile necessary for fat digestion, controls blood sugar and plays an important role in the immune system.

Toxins and other substances in our bloodstream can overburden the liver and accumulate over time, preventing it from functioning optimally in reducing inflammation and eliminating future harmful invaders. There is a known link between liver problems and atopic dermatitis (fatty liver being one of the most common liver-related comorbidities of psoriasis) making it even more important for those with skin conditions to support the liver through diet and lifestyle practices.

The Immune System

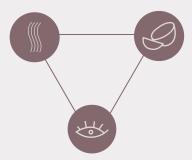
A network that protects the body from infection — and almost 70% of it is located in the gut! The immune system works at the gut barrier level to differentiate and respond to helpful and harmful substances that enter your digestive tract. It also communicates with the gut microbiome which, as explained above, can regulate immune function or create abnormal responses. As such, the relationship between autoimmune conditions and gut health is considered highly relevant.



You can think of your gut as one giant nerve centre.

It's a direct pathway for our neural activity, making it extremely sensitive to stressors.

stomach.



The Gut-Brain-Skin Axis

You've likely experienced the relationship between the gut and brain firsthand when feeling butterflies in your

Those butterflies are actually an instant chemical reaction that travels from your brain when it experiences an intense feeling and climaxes in the nerve endings of the gut. At the same time, your adrenal gland releases a small burst of adrenaline and cortisol which creates a very minor fight or flight response — the butterflies. Because it's a short, temporary blast, butterflies are not at all harmful to the body. They're actually considered a positive stressor, much like exercise.

When you have chronic anxiety, from a past trauma for example, adrenaline and cortisol are released more often and in larger amounts (even when you're not in physical or emotional danger). This constant output can create a hormonal imbalance in the body.

Cortisol + Adrenaline:
Hormones naturally produced by the body in moments of stress or perceived danger that cause physical responses like elevated heart rate, sweating and an increase in tissue-repairing substances.

Because they're released so frequently, the brain stops identifying these stress hormones as things to be processed and eliminated and they stick around. The process puts wide-ranging pressures on the body, particularly the liver, kidneys and gut. Common gastro-related effects of this process over time include inflammation, damage to the gut barrier and general gut dysfunction — all known associates of psoriasis and eczema.

The gut-brain-skin axis was acknowledged as early as 1909 by two physicians who wrote a study connecting depression and anxiety to altered gut function and inflammation manifesting on the skin. This was over a 100 years ago but the gut-brain-skin connection has had a renaissance in the last decade as functional medicine has come into the mainstream and we've become acutely aware of how our thoughts and environment are just as important as our genes.

Today, evidence suggests that the gut plays an essential role in the relationship between dermatology and mental health.

Gut Health

There are a number of gut issues associated with psoriasis, eczema and other skin conditions. This is your chance to consider the state of your own gut health and what steps you need to take moving forward.



Gut Health Issues Associated with Psoriasis and Eczema

Leaky Gut

The lining of our gut has a layer of mucus that is protective and helps keep the junctions between gut lining cells tight. A healthy gut lining allows well-digested starches, proteins, fats, water and other nutrients to travel to our bloodstream and nourish all of the body. In turn, it prevents bacteria, foreign substances and undigested food molecules from entering our bloodstream. Increased intestinal permeability — aka leaky gut syndrome — is when the cells of our gut lining have opened, which may allow larger particles, bacteria and other foreign substances to enter the bloodstream. The immune system reacts to this process, causing a wide range of issues including chronic inflammation, food intolerances, nutrient malabsorption, autoimmune responses, chronic fatigue, mental health responses (depression and anxiety) and liver issues.

Food and other factors involved in leaky gut:

- infections like small intestinal bacterial overgrowth (SIBO)
- excessive stress hormones like cortisol
- NSAIDs
- aspirin
- chemotherapy
- alcohol
- carrageenan: an additive found in many plant-based mylks
- lectins: found in nightshades, legumes, dairy and grains (soaking, sprouting, fermenting and/or proper cooking can deactivate lectins)
- gliadin: one of gluten's two proteins
- abdominal surgery can alter the integrity of our gut lining, especially intestinal resections or surgeries anywhere along the intestinal tract
- vitamin A deficiency: this deficiency is very rare in the US (beta carotene, which converts to vitamin A, helps repair tight junctions)
- zinc deficiency: this deficiency is less rare. Zinc carnosine also helps repair tight junctions
- oxidative stress: an imbalance between free radicals and antioxidants in your body which can create inflammation

Gut Health Issues Associated with Psoriasis and Eczema (continued)

Chronic Inflammation

Inflammation is one of the key factors in the development of many health conditions. Chronic inflammation may be reduced by eating anti-inflammatory foods and avoiding inflammatory ones. Eating a diet rich in anti-inflammatory foods can also help reduce psoriatic arthritis symptoms, joint pain and reduce the risk of cardiovascular disease.

Food and other factors involved in chronic inflammation:

- simple carbohydrates including refined white sugars and refined white flours
- excessive intake of sodium: sodium is especially high in processed, precooked, prepackaged foods most restaurant foods and many canned foods
- excessive intake of saturated fats which include red meats like beef and pork and full-fat dairy products
- trans fats: these are refined, hydrogenated oils like canola, vegetable oil, margarine and most vegan butters
- fried, smoked, barbequed foods and foods cooked in overheated oils
- alcohol
- smoking
- pesticides

- certain pharmaceutical, over-the-counter or recreational drugs excessive NSAID use is one example
- unresolved injury or low-grade infection
- environmental toxins like heavy metals, pollution and BPAs from plastics
- obesity
- gum disease: surprising, but true flossing and

proper oral hygiene can prevent a low-grade infection such as early gum disease

- mood disorders: our gut microbiome and brain communicate, meaning that gut health can affect mood and mood can affect gut health
- chronic stress is inflammatory; while we may not be able to remove all stressors and some stress is good (e.g. exercise puts a certain amount of healthy stress on the body), we can learn ways to restore, relax and manage our stress for improved gut health

Gut Health Issues Associated with Psoriasis and Eczema (continued)

Gut Dysbiosis

Simply put, this refers to an imbalance of microbes in the gut. This could be an overgrowth of pathogenic microbes as is the case with small intestinal bacterial overgrowth (SIBO), or it can be the absence of a critical species of friendly bacteria due to overuse of antibiotics, the Standard American Diet (SAD), excessive use of non-steroidal anti-inflammatory drugs (NSAIDs) or long-term use of antacids called proton pump inhibitors (PPIs).

Celiac Disease

A person with an autoimmune condition is at a higher risk for developing another autoimmune condition, and this is one to make sure you're aware of. There are also genetic, environmental and dietary factors that contribute to the development or onset of celiac disease. Celiac differs from a gluten sensitivity in that the person with celiac will have an autoimmune response when they ingest gluten, along with diarrhea and nutrient malabsorption.

Gluten Sensitivity

Gluten sensitivities are marked by the presence of antibodies for one of the proteins in gluten, usually along with some inflammation of the gut lining. A gluten-sensitive person may or may not experience symptoms like bloating, gas, diarrhea or constipation when including gluten in their diet, but this inflammation can lead to other issues (like leaky gut and skin conditions).

Other Food Sensitivities

Additional intolerances may present themselves. The good news is that if you truly heal the gut, in the future, you may be able to tolerate these foods in small quantities again.



JOURNAL

There are many factors that affect overall gut health, including medications, pre-existing conditions and genetic disposition — but diet is a great place to start, especially while you're in the midst of your Restore Protocol. Spend some time reflecting on your gut's reaction to what you consume:

How do gut health issues show up in your day-to-day life?

What are the main foods in your diet?

What dishes have you historically had trouble with?

What digestive symptoms do you most often struggle with (e.g. bloating, gas, pain, nausea, diarrhea or constipation)?

How often do you have meals and at what times?

Are you a slow eater or a fast eater?

How do you typically feel after eating?

How often do you consume foods like refined sugar and alcohol?

Do you crave certain foods regularly?

The rise of autoimmune conditions directly correlates with the rise of industrialized agriculture — there is a link here we can't ignore.

Across the spectrum of medicine, researchers are now considering the effect of industrialized farming on the body, namely the increase in chemicals in the food production pipeline, decrease in nutrient-dense food as a result of soil degradation, and increase in processed foods in the average diet. Each of these processes contributes to diminished exposure to good bacteria and organic diversity in the gut, shown to have impacts on health including autoimmune conditions.

On any given day, you're sure to find a conversation in the skin sensitive community about eating organic and cooking with whole foods. Well, you can't talk about those ingredients without looking at what we grow them in — little did you know that soil health is the beginning of the food pathway with your gut and skin at the end of it.

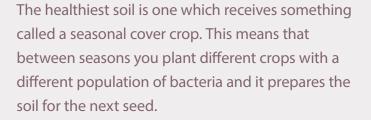


Focus: Soil

"It's too bad that soil is sometimes thought of as synonymous with dirt, because it's not. It's really more like gold."

- Dan O'Brien in the Patagonia documentary Unbroken Ground

Each year, we welcome harvests across the world. The bounty depends on a handful of environmental factors like light, temperature, water and humidity — and the increasingly human-influenced factor of soil quality.



Buckwheat is a useful cover crop. It grows quickly, prevents weeds and provides organic mulch for the next season's row.

When soil is given the tools to retain its nutrients (built up over thousands of years) those nutrients find their way into the foods we grow.

Soil degradation starts with agrochemicals or tilling to the point of erosion. It fractures soil structure and accelerates erosion making it more difficult for the soil to absorb water and nutrients.

Transitional cover crops to restore soil nutrients between seasonal harvests are not used by almost any large producers — tilling, herbicides and pesticides are.

Due to mass production and miseducation, these poor agricultural methods have left much of our soil infertile. It takes up 1,000 years to build three inches of nutrient-dense topsoil, but only a few dozen over-tilled harvests to deplete it.

Less determined by the bottom line, smaller producers experiment with other sustainable growing approaches using composting, livestock and new irrigation methods.

Consuming nutrient-rich foods bolsters the gut microbiome, which thrives from food and flora diversity.

When the crop finally peeks out of the earth it will do so with all of these factors written in its cellular matrix.

Studies show that even superfoods like kale will have considerably less nutritional value if grown on depleted soil.

The body thrives off nutrient-rich foods and suffers at the hands of chemicals like pesticides (linked to psoriasis and other autoimmune conditions).

Global studies are finding soil health across the world to be threatened. In 2014, the United Nations' Food and Agriculture Organization said soil degradation was proceeding at such a rate that the world may only have 60 harvests left.

Become an advocate for sustainable farming. Here a few ideas on how to get involved:

- check out our favorite films on soil and regenerative farming below
- apply to your nearest co-op and start shopping from the source
- research Community Supported Agriculture boxes (CSAs) that deliver to your area and commit to a box
- volunteer at an urban garden or just drop by and have a conversation about food

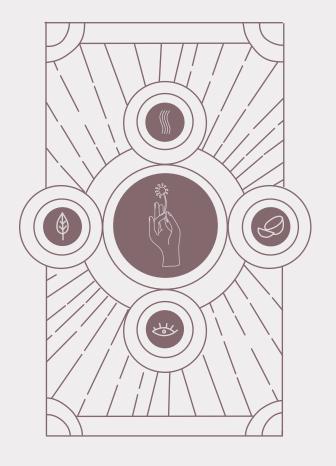


Need more guidance? You can always ask us for help. We're here for you!

Resources

Supporting Regeneration

The silver lining when it comes to gut issues is that our bodies are master healers. Our guts in particular tend to be very resilient, quickly adapting to lifestyle changes. In fact, the average gut barrier will regenerate new cells every three days. If the conditions are right, you may be able to heal your gut relatively quickly — just keep in mind we're talking about millions of cells that need to be regenerated.



Gauge the State of Your Microbiome

In addition to Restore, there are few ways to better understand what state your gut is in. A stool test offers adequate insight and tests for other pathogens, fungus and parasites.

You can also determine some key information through a blood test. In the US, you can order your own blood test through various labs, receive a full panel and have it read by a specialist.

A blood test can indicate what nutrient levels are out of balance, if an organ isn't properly functioning or if you are reacting to a pathogen or toxin in your system. Testing can be expensive but if you get the body into balance and are still experiencing issues it can be a good way to recieve direction for your next step in the healing journey.

Reflect and Restore

This module is the companion to our Restore Protocol. It's an opportunity to better understand the issues that could be afflicting your gut and impacting your skin condition and gain some motivation to make important changes! This is a deeply personal investigation; it can take time to determine what foods and lifestyle choices related to your diet are affecting you.

If you're in the midst of your Restore Protocol: It will be very helpful to track the physical reactions, changes and progress you experience while completing Restore. Use a journal or an app to track things like how you feel after you eat certain meals and any responses you experience from your skin (remember it can take months to see skin responses after eliminating sensitivities or overhauling your diet in general). As you continue to track, you'll more than likely begin to notice patterns in your digestion and this can be a great place to start understanding how your gut microbiome is doing.

During Restore and beyond: One of the reasons we've included an in-depth section on regeneration in our Restore Protocol is so that after you've completed this first step toward healing your gut, you can continue to tailor your diet to restoration and a strong gut microbiome. Refer back to our regeneration section in Restore, which dives into nutrient-rich foods and herbs. No matter where you are in your journey, make sure you're packing your day-to-day with anti-inflammatory vitamins like A, C and E, mitigating pro-oxidants and maximizing antioxidants. Consult our full lists in Restore (p.72).

We digest better when we're in good company. Food is not just fuel, it's the way we connect to others and our cultures.

Make a choice to eat intentionally and in a balanced way — your body will respond graciously and you'll have more time to focus on the joys in life, like the people around you.

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- Miriam

Be sure to check out the Restore playlist on YouTube.

Next up:



The Mind-Body

Don't forget to write in your journal and find 9 minutes of quiet time every day.

We're here for you.

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